El Abra-Like Reef and Backreef Limestone, Assessment Unit 53050101 Assessment Results Summary

[MMBO, million barrels of oil. BCFG, billion cubic feet of gas. MMBNGL, million barrels of natural gas liquids. MFS, minimum field size assessed (MMBO or BCFG). Prob., probability (including both geologic and accessibility probabilities) of at least one field equal to or greater than the MFS. Results shown are fully risked estimates. For gas fields, all liquids are included under the NGL (natural gas liquids) category. F95 represents a 95 percent chance of at least the amount tabulated. Other fractiles are defined similarly. Fractiles are additive under the assumption of perfect positive correlation. Shading indicates not applicable]

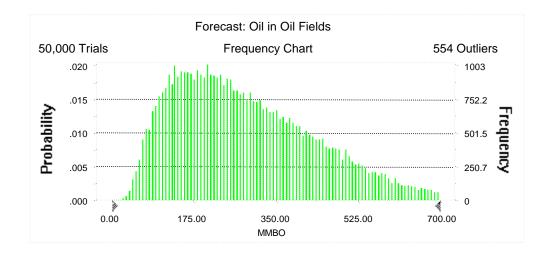
Field	MFS	S Prob.	Undiscovered Resources								Largest Undiscovered Field							
Type			Oil (MMBO)			Gas (BCFG)			NGL (MMBNGL)			(MMBO or BCFG)						
.) 0		(0-1)	F95	F50	F5	Mean	F95	F50	F5	Mean	F95	F50	F5	Mean	F95	F50	F5	Mean
Oil Fields	1	1.00	86	262	577	289	104	332	794	375	6	19	50	23	20	51	131	60
Gas Fields	6	1.00					29	113	301	132	1	5	14	6	25	71	206	87
Total		1.00	86	262	577	289	133	445	1,095	507	7	24	64	28				

Forecast: Oil in Oil Fields

Summary:

Display range is from 0.00 to 700.00 MMBO Entire range is from 23.18 to 1,104.06 MMBO After 50,000 trials, the standard error of the mean is 0.69

Statistics:	<u>Value</u>
Trials	50000
Mean	288.80
Median	262.12
Mode	
Standard Deviation	153.71
Variance	23,626.68
Skewness	0.74
Kurtosis	3.18
Coefficient of Variability	0.53
Range Minimum	23.18
Range Maximum	1,104.06
Range Width	1,080.88
Mean Standard Error	0.69



Forecast: Oil in Oil Fields (cont'd)

Percentiles:

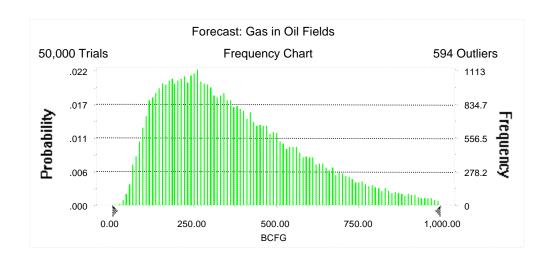
Percentile	MMBO
100%	23.18
95%	86.39
90%	110.14
85%	129.98
80%	148.81
75%	167.08
70%	185.84
65%	204.60
60%	222.98
55%	242.25
50%	262.12
45%	283.80
40%	306.71
35%	331.17
30%	357.62
25%	386.92
20%	419.87
15%	458.29
10%	505.18
5%	576.91
0%	1,104.06
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Forecast: Gas in Oil Fields

Summary:

Display range is from 0.00 to 1,000.00 BCFG Entire range is from 18.32 to 1,571.38 BCFG After 50,000 trials, the standard error of the mean is 0.97

Statistics:	<u>Value</u>
Trials	50000
Mean	375.12
Median	332.19
Mode	
Standard Deviation	217.62
Variance	47,356.91
Skewness	1.00
Kurtosis	3.99
Coefficient of Variability	0.58
Range Minimum	18.32
Range Maximum	1,571.38
Range Width	1,553.06
Mean Standard Error	0.97



Forecast: Gas in Oil Fields (cont'd)

Percentiles:

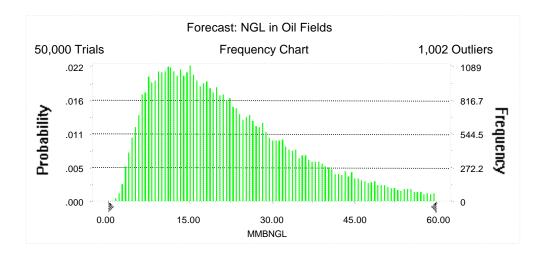
Percentile	BCFG
100%	18.32
95%	103.80
90%	133.40
85%	159.33
80%	184.06
75%	208.07
70%	232.19
65%	256.09
60%	279.44
55%	304.35
50%	332.19
45%	359.81
40%	389.96
35%	423.01
30%	459.21
25%	499.12
20%	547.46
15%	604.06
10%	677.88
5%	794.23
0%	1,571.38

Forecast: NGL in Oil Fields

Summary:

Display range is from 0.00 to 60.00 MMBNGL Entire range is from 0.88 to 130.62 MMBNGL After 50,000 trials, the standard error of the mean is 0.06

Statistics:	<u>Value</u>
Trials	50000
Mean	22.51
Median	19.39
Mode	
Standard Deviation	14.11
Variance	198.97
Skewness	1.23
Kurtosis	4.94
Coefficient of Variability	0.63
Range Minimum	0.88
Range Maximum	130.62
Range Width	129.74
Mean Standard Error	0.06



Forecast: NGL in Oil Fields (cont'd)

Percentiles:

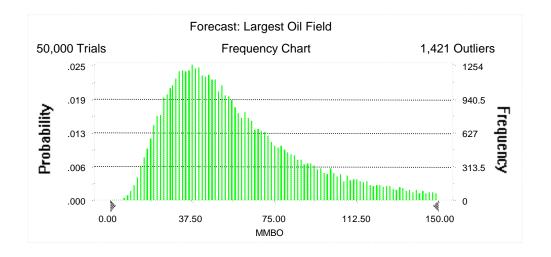
<u>MMBNGL</u>
0.88
5.81
7.52
9.06
10.49
11.89
13.34
14.78
16.22
17.79
19.39
21.11
22.89
24.98
27.24
29.81
32.90
36.77
41.85
50.01
130.62

Forecast: Largest Oil Field

Summary:

Display range is from 0.00 to 150.00 MMBO Entire range is from 5.55 to 199.91 MMBO After 50,000 trials, the standard error of the mean is 0.15

Statistics:	<u>Value</u>
Trials	50000
Mean	59.72
Median	51.05
Mode	
Standard Deviation	34.60
Variance	1,197.10
Skewness	1.32
Kurtosis	4.80
Coefficient of Variability	0.58
Range Minimum	5.55
Range Maximum	199.91
Range Width	194.36
Mean Standard Error	0.15



Forecast: Largest Oil Field (cont'd)

Percentiles:

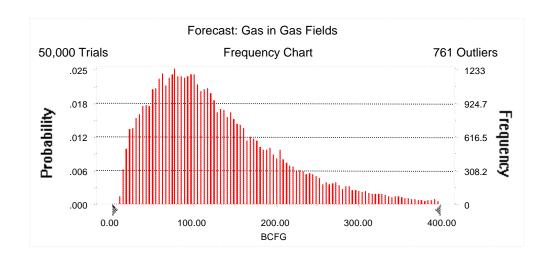
Percentile	ММВО
100%	5.55
95%	19.98
90%	24.74
85%	28.45
80%	31.87
75%	34.97
70%	38.07
65%	41.10
60%	44.34
55%	47.56
50%	51.05
45%	54.73
40%	58.96
35%	63.71
30%	69.07
25%	75.31
20%	83.12
15%	93.28
10%	107.71
5%	131.46
0%	199.91

Forecast: Gas in Gas Fields

Summary:

Display range is from 0.00 to 400.00 BCFG Entire range is from 8.15 to 850.68 BCFG After 50,000 trials, the standard error of the mean is 0.39

Statistics:	<u>Value</u>
Trials	50000
Mean	132.19
Median	112.61
Mode	
Standard Deviation	87.95
Variance	7,735.83
Skewness	1.49
Kurtosis	6.37
Coefficient of Variability	0.67
Range Minimum	8.15
Range Maximum	850.68
Range Width	842.53
Mean Standard Error	0.39



Forecast: Gas in Gas Fields (cont'd)

Percentiles:

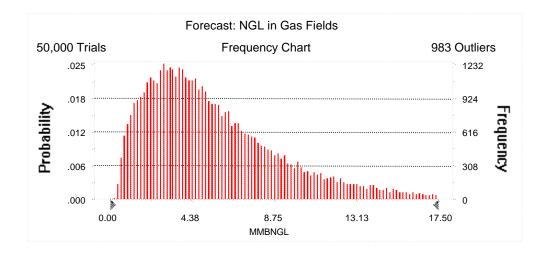
<u>Percentile</u>	<u>BCFG</u>
100%	8.15
95%	29.12
90%	40.83
85%	51.42
80%	60.48
75%	69.17
70%	77.75
65%	86.12
60%	94.84
55%	103.28
50%	112.61
45%	122.16
40%	133.14
35%	145.06
30%	157.89
25%	173.51
20%	192.15
15%	214.40
10%	246.43
5%	301.07
0%	850.68

Forecast: NGL in Gas Fields

Summary:

Display range is from 0.00 to 17.50 MMBNGL Entire range is from 0.26 to 54.77 MMBNGL After 50,000 trials, the standard error of the mean is 0.02

Statistics:	<u>Value</u>
Trials	50000
Mean	5.82
Median	4.82
Mode	
Standard Deviation	4.12
Variance	16.96
Skewness	1.68
Kurtosis	7.54
Coefficient of Variability	0.71
Range Minimum	0.26
Range Maximum	54.77
Range Width	54.52
Mean Standard Error	0.02



Forecast: NGL in Gas Fields (cont'd)

Percentiles:

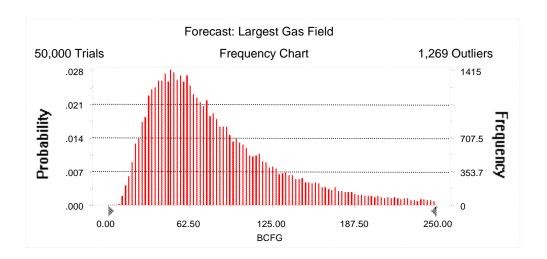
MMBNGL
0.26
1.21
1.69
2.13
2.53
2.90
3.27
3.65
4.02
4.41
4.82
5.26
5.75
6.30
6.90
7.62
8.48
9.57
11.15
13.84
54.77

Forecast: Largest Gas Field

Summary:

Display range is from 0.00 to 250.00 BCFG Entire range is from 8.15 to 499.30 BCFG After 50,000 trials, the standard error of the mean is 0.27

Statistics:	<u>Value</u>
Trials	50000
Mean	86.92
Median	70.50
Mode	
Standard Deviation	60.58
Variance	3,670.51
Skewness	2.05
Kurtosis	9.14
Coefficient of Variability	0.70
Range Minimum	8.15
Range Maximum	499.30
Range Width	491.14
Mean Standard Error	0.27



Forecast: Largest Gas Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	8.15
95%	25.24
90%	31.73
85%	36.87
80%	41.72
75%	46.23
70%	50.86
65%	55.51
60%	60.22
55%	65.03
50%	70.50
45%	76.38
40%	82.78
35%	90.18
30%	98.70
25%	108.67
20%	120.97
15%	137.82
10%	161.10
5%	206.06
0%	499.30

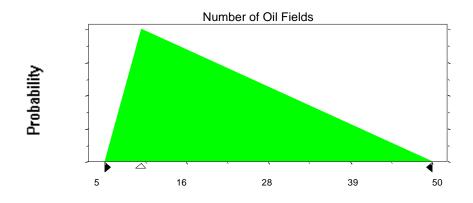
Assumptions

Assumption: Number of Oil Fields

Triangular	distribution	with	parameters:
i HaHuulai	uistributiori	VVILII	parameters.

Minimum	5
Likeliest	10
Maximum	50

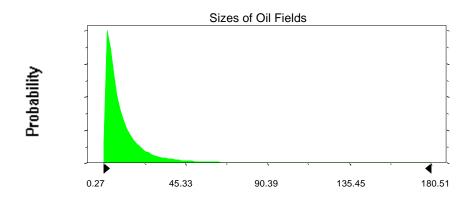
Selected range is from 5 to 50 Mean value in simulation was 22



Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:		Shifted parameters	
Mean	12.59		13.59
Standard Deviation	18.81		18.81
Selected range is from 0.00 to 199.00		1.00 to 2	200.00
Mean value in simulation was 12.24			13.24

Assumption: Sizes of Oil Fields (cont'd)



Assumption: GOR in Oil Fields

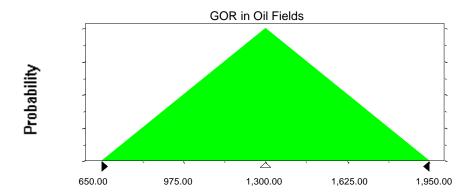
Triangular distribution with parameters:

 Minimum
 650.00

 Likeliest
 1,300.00

 Maximum
 1,950.00

Selected range is from 650.00 to 1,950.00 Mean value in simulation was 1,299.17

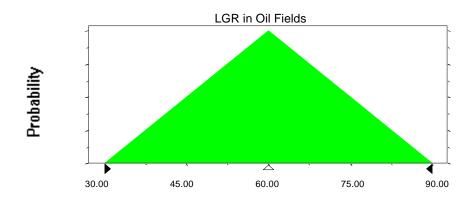


Assumption: LGR in Oil Fields

Triangular distribution with parameters:

Minimum	30.00
Likeliest	60.00
Maximum	90.00

Selected range is from 30.00 to 90.00 Mean value in simulation was 59.99



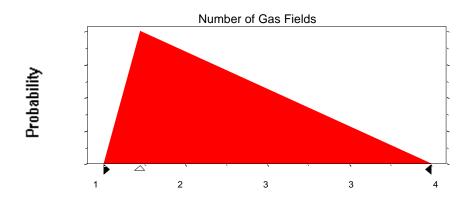
Assumption: Number of Gas Fields

Triangular distribution with parameters:

Minimum	1
Likeliest	1
Maximum	4

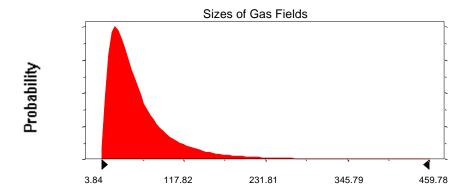
Selected range is from 1 to 4 Mean value in simulation was 2

Assumption: Number of Gas Fields (cont'd)



Assumption: Sizes of Gas Fields

Lognormal distribution with parameters	•	Shifted parameters	
Mean	57.73		63.73
Standard Deviation	54.45		54.45
Selected range is from 0.00 to 494.00		6.00 to	500.00
Mean value in simulation was 57.28			63.28

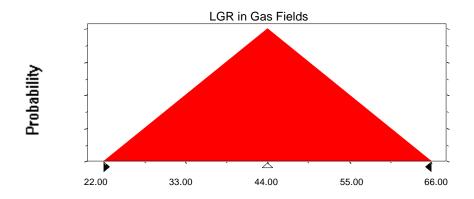


Assumption: LGR in Gas Fields

Triangular distribution with parameters:

Minimum	22.00
Likeliest	44.00
Maximum	66.00

Selected range is from 22.00 to 66.00 Mean value in simulation was 44.00



End of Assumptions

Simulation started on 12/2/99 at 9:35:33 Simulation stopped on 12/2/99 at 9:54:55